

WHAT IS CLAIMED IS:

1. A system for processing broadcast multimedia program content and advertisements to provide a composite program datastream having multimedia data content and user targeted advertisements to multiple different users, comprising:

an input processor operable to concurrently receive broadcast multimedia program content from multiple sources;

a scheduler operable to schedule time of insertion of a designated advertisement into selected broadcast multimedia program content; and

a multiplexer operable to provide multiple users with individualized composite program datastreams by performing in parallel for multiple users:

insertion of a designated advertisement into a selected multimedia program content at a scheduled insertion time to form a composite program datastream; and

coupling of said composite program datastream to a corresponding user of the multiple users.

2. The system of claim 1, wherein:

said broadcast multimedia program content comprises at least one of (a) streamed audio data, (b) streamed video data, (c) voice representative data, (d) voicemail data, and (e) a radio or video broadcast.

3. The system of claim 1, wherein:

said scheduler receives and pre-caches advertisements from multiple sources to provide candidate advertisements for selection of said designated advertisement for insertion in said selected multimedia program content at said scheduled insertion time.

4. The system of claim 1, wherein:

said scheduler schedules insertion of said designated advertisement into said multimedia program content based on at least one of (a) scheduling information provided by a broadcast source of said selected broadcast multimedia program, and (b) scheduling information provided by a source of said designated advertisement.

5. The system of claim 4, wherein:

said scheduling information contains advertisement scheduling information covering multiple broadcast multimedia programs.

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6. The system of claim 4, wherein:

said scheduling information provided by a broadcast source comprises at least one of (a) information indicating time slots available for advertisement insertion in said broadcast multimedia program, (b) markers in said selected broadcast multimedia program indicating an advertisement insertion time slot, and (c) information for identifying advertisement insertion time slots from time stamp indications.

7. The system of claim 1, wherein:

said multiplexer repeats said composite program datastream by mapping stored data comprising said composite program datastream to provide multiple stored copies of said composite program datastream for coupling to multiple users to enable scaleable expansion of broadcast of said composite program datastream.

8. The system of claim 1, wherein:

said multiplexer tracks a user connection and maintains a database of user connection related statistics comprising at least one of (a) user favorite program sources, (b) number of advertisements broadcast, (c) number of users receiving said composite program datastream, and (d) length of user connection to a particular composite program datastream.

9. The system of claim 1, wherein:

said multiplexer dynamically reallocates advertisements targeted to a user during broadcast of said composite program datastream in response to a command by selecting an advertisement from a plurality of available advertisements of duration suitable for a time slot at said scheduled insertion time.

10. The system of claim 9, wherein:

a locally sourced advertisement is selected for said time slot in preference to a non-locally sourced advertisement.

11. The system of claim 10, further comprising:

an error processor operable to parse said composite program datastream to detect error, and including an error concealment function operable to reduce the consequences of a detected error.

12. The system of claim 1, further comprising:

a user profile database operable to allocate one of a plurality of available different advertisements for delivery to an individual user based on previously compiled user preference data in said user profile database; and

a data acquisition processor operable to compile user preference information used in said user profile database based on prior user program selection history.

13. A system for processing broadcast multimedia program content and advertisements to provide a composite program datastream having multimedia data content and user targeted advertisements to multiple different users, comprising:

a condition access processor operable to determine authorization of multiple broadcast sources to concurrently provide broadcast multimedia program content to the system;

a scheduler operable to schedule time of insertion of a designated advertisement into selected broadcast multimedia program content; and

a multiplexer operable to provide multiple users with individualized composite program datastreams by performing in parallel for multiple users:

insertion of a designated advertisement into a selected multimedia program content at a scheduled insertion time to form a composite program datastream; and

coupling of said composite program datastream to a corresponding user of the multiple users.

14. The system of claim 13, wherein:

said conditional access processor determines authorization of a broadcast source to provide broadcast multimedia program content based on at least one of (a) a broadcaster ID, and (b) a password.

15. The system of claim 13, wherein:

said conditional access processor includes a decryption function to decrypt at least one of (a) encrypted broadcast multimedia program content, and (b) an encrypted authorization code or password.

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said multiplexer repeats said composite program datastream by mapping stored data comprising said composite program datastream to provide multiple stored copies of said composite program datastream for coupling to multiple users to enable scaleable expansion of broadcast of said composite program datastream.

an input processor operable to concurrently receive broadcast multimedia program content (Station 1-3) from multiple sources;

a multiplexer operable to provide multiple users with individualized composite program datastreams by, performing in parallel for multiple users:

coupling of said composite program datastream to a corresponding user.

said multiplexer records data identifying broadcast multimedia programs and advertisements provided to users, and

19. The system of claim 17, wherein:

said multiplexer repeats said composite program datastream by mapping stored data comprising said composite program datastream to provide multiple stored copies of said composite program datastream for coupling to multiple users to enable scaleable expansion of broadcast of said composite program datastream.

20. In a system for processing broadcast multimedia program content and advertisements to provide a composite program datastream including multimedia data content and user targeted advertisements to multiple different users, a method comprising:

concurrently receiving broadcast multimedia program content (Station 1-3) from multiple sources;

scheduling time of insertion of a designated advertisement into selected broadcast multimedia program content; and

providing multiple users with individualized composite program datastreams by performing in parallel for multiple users:

insertion of a designated advertisement into a selected multimedia program content at a scheduled insertion time to form a composite program datastream; and

coupling of said composite program datastream to a corresponding user of the multiple users.

21. A system for providing terrestrially broadcast audio programs from a terrestrial broadcaster and advertisements over a network to multiple users, the advertisements targeted for specific users of the multiple users, the system comprising:

a scheduler operable to receive advertisement insertion data from the terrestrial broadcaster corresponding to terrestrial broadcast audio programs from the terrestrial broadcaster and provide an advertisement insertion schedule for each one of the terrestrial broadcast audio content;

a program aggregator operable to: (a) receive a plurality of terrestrially broadcast audio programs from the terrestrial broadcasters, the terrestrially broadcast audio programs having advertisement insertion markers, (b) receive an advertisement insertion schedule from the scheduler for each one of the terrestrially audio programs, and (c) provide an advertisement marked composite datastream for each one of the terrestrial broadcast audio programs; and

a multiplexer operable to provide one of the advertisement marked composite datastreams and a targeted advertisement from a plurality of advertisements to any one of the multiple users.

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